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1 **CLAIMS:**

2 What is claimed is:

1 1. A method in a communications system for routing a call, the method
2 comprising:
3 receiving a call;
4 identifying call routing information for the call;
5 responsive to identifying call routing information, determining whether a
6 function has been selected for routing the call; and
7 responsive to a determination that a function has been selected for routing the
8 call, routing the call using a sequence of destinations associated with the function.

1 2. The method of claim 1 further comprising:
2 responsive to identifying call routing information, determining whether a call
3 routing schedule based on time has been selected for routing the call; and
4 responsive to a determination that a call routing schedule based on time is to
5 be used, routing the call using a call routing schedule based on time.

1 3. The method of claim 1, further comprising:
2 responsive to a determination that a function has been selected for routing the
3 call, determining whether a time period for the function has expired;
4 responsive to a determination that a time period for the function has expired,
5 routing the call; and
6 routing the call using a call routing schedule based on time instead of using
7 the sequence of destinations associated with the function.

1 4. The method of claim 1 further comprising:

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2 monitoring results from routing of the call; and
3 automatically modifying the call routing information based on the results to
4 form modified call routing information, wherein subsequent calls are routed using the
5 modified call routing information.

1 5. The method of claim 1, wherein the call is routed to a subscriber associated
2 with the function.

1 6. The method of claim 2 further comprising:
2 monitoring results from routing of the call to the subscriber; and
3 automatically modifying the call routing information based on the results to
4 form modified call routing information, wherein subsequent calls are routed using the
5 modified call routing information.

1 7. A method in a communications system for call routing a call, the method
2 comprising:
3 receiving a call to a subscriber;
4 routing the call to the subscriber using a sequence of destinations associated
5 with the subscriber; and
6 responsive to a success of routing the call to the subscriber to a destination
7 within the sequence of destinations, automatically modifying the sequence of
8 destinations used to call the subscriber, wherein the sequence of destinations is
9 modified to favor destinations with successful call completions.

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11 8. The method of claim 7, wherein the sequence of destinations is modified to
12 favor destinations with a selected level of call completions.

1 9. The method of claim 7 further comprising:

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2 responsive to detecting initiation of a call by the subscriber from an origin
3 absent from the sequence of destinations, modifying the sequence of destinations to
4 include the origin as a destination within the sequence of destinations.

1 10. The method of claim 8, wherein the origin is included as a destination within
2 the sequence of destinations for a period of time.

1 11. The method of claim 8, wherein the calling line identifier is recorded to
2 identify the origin from which the subscriber initiated the call.

1 12. The method of claim 7, wherein the sequence of destinations are associated
2 with a time slot.

1 13. The method of claim 7, wherein the sequence of destinations are associated
2 with a function.

1 ~~14.~~ A method in a communications system for call routing a call, the method
2 comprising:
3 receiving a call to a subscriber;
4 routing the call using call routing information associated with the subscriber;
5 monitoring results from routing of the call to the subscriber; and
6 automatically modifying the call routing information based on the results to
7 form modified call routing information, wherein subsequent calls are routed using the
8 modified call routing information.

1 15. The method of claim 14, wherein the step of routing the call comprises:
2 routing the call to a main destination; and

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3 responsive to an absence of an answer at the main destination, routing the call
4 to an alternate destination.

1 16. A method in a communications system for call routing a call, the method
2 comprising:

3 receiving a call to a subscriber;

4 identifying a time of the call;

5 routing the call to the first destination in an ordered set of destinations for the
6 subscriber based on the time of the call;

7 responsive to an absence of an answer of the call at the first destination,

8 routing the call to a second destination in the ordered set of destinations;

9 responsive to an absence of an answer of the call at the second destination,

10 routing the call to a third destination in the ordered set of destinations; and

11 responsive to an answer of the call at the third destination for a number of
12 times, selecting the third alternate destination as the first alternate destination.

1 17. The method of claim 16, wherein the second alternate destination is selected
2 as the first alternate destination for a temporary period of time.

1 18. The method of claim 17, wherein the temporary period of time is a day.

1 19. The method of claim 16 further comprising:

2 responsive to the third destination being answered over a period of time,
3 setting the third destination as the second destination.

1 20. The method of claim 16 further comprising:

2 responsive to the second destination being answered over a period of time,
3 setting the second destination as the first destination.

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1 21. A method in a graphical user interface for use in routing calls in a
2 communications system, the method comprising the computer implemented steps of:
3 displaying a set of icons, wherein each icon within the set of icons is
4 associated with a function used to route calls to a party; and
5 responsive to a selection of an icon within the set of icons, sending a message
6 to the communications system to route calls to the party using a calling sequence
7 associated with the function.

1 22. The method of claim 21 further comprising:
2 displaying a scheduling icon; and
3 responsive to a selection of the scheduling icon, sending a message to the
4 communications system to route calls to the party using a time based calling schedule.

1 23. The method of claim 22, wherein the selection of an icon from the set of icons
2 overrides any previous selection of an icon from the set of icons.

1 24. The method of claim 23, wherein the selection of the icon overrides a previous
2 selection of the scheduling icon.

1 25. The method of claim 21, wherein the data processing system is a personal
2 computer.

1 26. The method of claim 21, wherein the data processing system is a mobile
2 phone.

1 27. The method of claim 21, wherein the data processing system is a personal
2 digital assistant.

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1 28. A switch comprising:
2 an input for receiving a call for a party;
3 signaling interface for sending a request to a database for call routing
4 information, wherein call routing information from the database includes a calling
5 sequence for a function associated with the party in response to the party previously
6 selecting the function; and
7 a switch fabric, wherein the call is routed from the input through the switch
8 fabric to an output to a destination returned by the database using the calling sequence
9 for the function.

10
11 29. The switch of claim 28, wherein the request sent from the signaling interface
12 to the database is sent to a service control point, which provides an interface to the
13 database.

14
1 30. A service control point comprising:
2 an input/output interface, wherein request for routing information is received
3 from a requestor at the input/output interface and routing information returned to the
4 requestor;
5 a database containing a plurality of calling sequences for subscribers; and
6 a processing unit connected to the input/output interface and the database,
7 wherein the processing unit has a plurality of modes of operation including:
8 a first mode of operation in which the processing unit monitors for
9 requests for routing information;
10 a second mode of operation, responsive to receiving a request, in
11 which the processing unit identifies routing information for the call;
12 a third mode of operation, responsive to identifying routing
13 information for the call, in which the processing unit determines whether a function
14 has been selected for routing the call;

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15 a fourth mode of operation, responsive to a determination that a
16 function has been selected for routing the call, in which the processing unit sends
17 routing information for the call using a sequence of destinations associated with the
18 function; and

19 a fifth mode of operation, responsive to an absence of a determination
20 that a function has been selected for routing the call, in which the processing unit
21 sends routing information for the call using a call routing schedule based on time.

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1 31. A communications system for routing a call, the communications system
2 comprising:
3 receiving means for receiving a call;
4 identifying means for identifying call routing information for the call;
5 determining means, responsive to identifying call routing information, for
6 determining whether a function has been selected for routing the call; and
7 routing means, responsive to a determination that a function has been selected
8 for routing the call, for routing the call using a sequence of destinations associated
9 with the function.

1 32. The communications system of claim 31 further comprising:
2 determining means, responsive to identifying call routing information, for
3 determining whether a call routing schedule based on time has been selected for
4 routing the call; and
5 routing means, responsive to a determination that a call routing schedule
6 based on time is to be used, for routing the call using a call routing schedule based on
7 time.

8
9 33. The communications system of claim 31, further comprising:

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10 determining means, responsive to a determination that a function has been
11 selected for routing the call, for determining whether a time period for the function
12 has expired;

13 first routing means, responsive to a determination that a time period for the
14 function has expired, for routing the call; and

15 second routing means for routing the call using a call routing schedule based
16 on time instead of using the sequence of destinations associated with the function.

1 34. The communications system of claim 31 further comprising:
2 first monitoring means for monitoring results from routing of the call; and
3 second modifying means for automatically modifying the call routing
4 information based on the results to form modified call routing information, wherein
5 subsequent calls are routed using the modified call routing information.

1 35. The communications system of claim 31, wherein the call is routed to a
2 subscriber associated with the function.

1 36. The communications system of claim 32 further comprising:
2 monitoring means for monitoring results from routing of the call to the
3 subscriber; and
4 modifying means for automatically modifying the call routing information
5 based on the results to form modified call routing information, wherein subsequent
6 calls are routed using the modified call routing information.

1 37. A communications system for call routing a call, the communications system
2 comprising:
3 receiving means for receiving a call to a subscriber;

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4 routing means for routing the call to the subscriber using call a sequence of
5 destinations associated with the subscriber; and

6 modifying means, responsive to a success of routing the call to the subscriber
7 to a destination within the sequence of destinations, for automatically modifying the
8 sequence of destinations used to call the subscriber, wherein the sequence of
9 destinations is modified to favor destinations with successful call completions.

1 38. The communications system of claim 37 further comprising:

2 modifying means, responsive to detecting initiation of a call by the subscriber
3 from an origin absent from the sequence of destinations, for modifying the sequence
4 of destinations to include the origin as a destination within the sequence of
5 destinations.

1 39. The communications system of claim 38, wherein the origin is included as a
2 destination within the sequence of destinations for a period of time.

1 40. The communications system of claim 38, wherein the calling line identifier is
2 recorded to identify the origin from which the subscriber initiated the call.

1 41. The communications system of claim 37, wherein the sequence of destinations
2 are associated with a time slot.

1 42. The communications system of claim 37, wherein the sequence of destinations
2 are associated with a function.

1 43. A communications system for call routing a call, the communications system
2 comprising:

3 receiving means for receiving a call to a subscriber;

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4 routing means for routing the call using call routing information associated
5 with the subscriber;

6 monitoring means for monitoring results from routing of the call to the
7 subscriber; and

8 modifying means for automatically modifying the call routing information
9 based on the results to form modified call routing information, wherein subsequent
10 calls are routed using the modified call routing information.

1 44. The communications system of claim 43, wherein the means of routing the
2 call comprises:

3 first routing means for routing the call to a main destination; and

4 second routing means, responsive to an absence of an answer at the main
5 destination, for routing the call to an alternate destination.

1 45. A communications system for call routing a call, the communications system
2 comprising:

3 receiving means for receiving a call to a subscriber;

4 identifying means for identifying a time of the call;

5 first routing means for routing the call to the first destination in an ordered set
6 of destinations for the subscriber based on the time of the call;

7 second routing means, responsive to an absence of an answer of the call at the
8 first destination, for routing the call to a second destination in the ordered set of
9 destinations;

10 responsive to an absence of an answer of the call at the second destination,
11 routing the call to a third destination in the ordered set of destinations;

12 responsive to an answer of the call at the third destination for a number of
13 times, selecting the third alternate destination as the first alternate destination.

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1 46. The communications system of claim 45, wherein the second alternate
2 destination is selected as the first alternate destination for a temporary period of time.

1 48. The communications system of claim 45 further comprising:
2 setting means, responsive to the third destination being answered over a
3 period of time, for setting the third destination as the second destination.

50. A in a graphical user interface for use in routing calls in communications system, the communications system comprising:

- displaying means for displaying a set of icons, wherein each icon within the set of icons is associated with a function used to route calls to a party; and
- sending means, responsive to a selection of an icon within the set of icons, for sending a message to the communications system to route calls to the party using a calling sequence associated with the function.

1 51. The graphical user interface of claim 50 further comprising:
2 displaying means for displaying a scheduling icon; and
3 sending means, responsive to a selection of the scheduling icon, for sending a
4 message to the communications system to route calls to the party using a time based
5 calling schedule.

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1 52. The graphical user interface of claim 51, wherein the selection of an icon from
2 the set of icons overrides any previous selection of an icon from the set of icons.

1 53. The graphical user interface of claim 52, wherein the selection of the icon
2 overrides a previous selection of the scheduling icon.

1 54. The graphical user interface of claim 50, wherein the data processing system
2 is a personal computer.

1 55. The graphical user interface of claim 50, wherein the data processing system
2 is a mobile phone.

1 56. The graphical user interface of claim 50, wherein the data processing system
2 is a personal digital assistant.

1 ~~57.~~ A computer program product in a computer readable medium for routing a
2 call, the computer program product comprising:
3 first instructions for receiving a call;
4 second instructions for identifying call routing information for the call;
5 third instructions, responsive to identifying call routing information, for
6 determining whether a function has been selected for routing the call; and
7 fourth instructions, responsive to a determination that a function has been
8 selected for routing the call, for routing the call using a sequence of destinations
9 associated with the function.

1 58. A computer program product in a computer readable medium for call routing
2 a call, the computer program product comprising:
3 first instructions for receiving a call to a subscriber;

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4 second instructions for routing the call to the subscriber using call a sequence
5 of destinations associated with the subscriber; and

6 third instructions, responsive to a success of routing the call to the subscriber
7 to a destination within the sequence of destinations, for automatically modifying the
8 sequence of destinations used to call the subscriber, wherein the sequence of
9 destinations is modified to favor destinations with successful call completions.

1 59. A computer program product in a computer readable medium for call routing
2 a call, the computer program product comprising:

3 first instructions for receiving a call to a subscriber;

4 second instructions for identifying a time of the call;

5 third instructions for routing the call to the first destination in an ordered set of
6 destinations for the subscriber based on the time of the call;

7 fourth instructions, responsive to an absence of an answer of the call at the
8 first destination, for routing the call to a second destination in the ordered set of
9 destinations;

10 fifth instructions, responsive to an absence of an answer of the call at the
11 second destination, for routing the call to a third destination in the ordered set of
12 destinations;

13 sixth instructions, responsive to an answer of the call at the third destination
14 for a number of times, for selecting the third alternate destination as the first alternate
15 destination.

1 60. A computer program product in a computer readable medium for use in
2 routing calls in a communications system, the computer program product comprising:

3 first instructions for displaying a set of icons, wherein each icon within the set
4 of icons is associated with a function used to route calls to a party; and

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- 5 second instructions, responsive to a selection of an icon within the set of
6 icons, for sending a message to the communications system to route calls to the party
7 using a calling sequence associated with the function.

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